

Having described the invention, we claim:

1. An actuatable fastener comprising:

a body including a head and a shank, said body including an interior chamber partially defined by a side wall extending from said head into said shank and an end wall positioned in said shank;

a member disposed in said chamber; and

an initiator actuatable to produce combustion products in said chamber that act on said member to move said member in a first direction in said chamber to strike said end wall, said member striking said end wall creating a fracture in said shank separating at least a portion of said shank from a remainder of said shank, said combustion products moving said member beyond said fracture at least a predetermined distance to move said at least a portion of said shank at least said predetermined distance from said remainder of said shank.

2. The actuatable fastener recited in claim 1, wherein said shank includes a first shank portion opposite said head and a second shank portion positioned between said first shank portion and said head, said

first shank portion being separated from said second shank portion when said shank is ruptured.

3. The actuatable fastener recited in claim 2, wherein said shank includes an annular groove separating said first shank portion from said second shank portion, said fracture occurring at said annular groove.

4. The actuatable fastener recited in claim 1, wherein said member has an interference fit with said side wall that forms a seal to block said combustion products from escaping said chamber.

5. The actuatable fastener recited in claim 1, wherein said combustion products comprise at least one of solids and luminous ignition flashes.

6. The actuatable fastener recited in claim 1, wherein said initiator is at least partially supported in said head.

7. The actuatable fastener recited in claim 1, wherein said body comprises a metal housing and a plastic

portion molded onto said housing, said metal housing forming a portion of said head, said plastic portion forming said shank and a portion of said head.

8. The actuatable fastener recited in claim 1, wherein said shank has a first portion connectable with a first part and a second portion connectable with a second part, the first part being movable relative to the second part, said first portion of said shank being separated from said second portion of said shank when said member causes said fracture in said shank, said member moving said first portion of said shank and said first part at least said predetermined distance from said second portion of said shank and said second part.

9. The actuatable fastener recited in claim 2, wherein said first shank portion has an outer surface comprising first screw threads and said second shank portion has an outer surface comprising second screw threads.

10. The actuatable fastener recited in claim 9, wherein one of said first and second screw threads

comprise right hand threads and the other of said first and second screw threads comprise left hand threads.

11. The actuatable fastener recited in claim 9, further comprising a first fastener that cooperates with said first screw threads to fixedly connect said first shank portion to a first part, and a second fastener that cooperates with said second screw threads to fixedly connect said second shank portion to a second part, said first and second parts thereby being releasably connected to each other.

12. The actuatable fastener recited in claim 2, wherein said chamber comprises a sleeve portion having a first end located in said head and an opposite second end located in said shank, said sleeve portion being at least partially defined by a side wall extending from said first end of said sleeve portion to said second end of said sleeve portion, said side wall defining said sleeve portion having a first diameter at said first end of said of said sleeve portion and tapering to a second diameter smaller than said first diameter at said second end of said sleeve portion.

13. The actuatable fastener recited in claim 12, wherein said chamber further comprises a cylinder portion and said member includes a portion comprising a piston and a portion comprising a punch, said piston being disposed in and movable along said cylinder portion, said punch being disposed in and movable along said sleeve portion.

14. The actuatable fastener recited in claim 13, further comprising at least one annular ring projecting from and extending around an annular outer surface of said piston, said at least one ring engaging a side wall that at least partially defines said cylinder portion and providing a seal for helping to block said combustion products from escaping said chamber when said initiator is actuated.

15. The actuatable fastener recited in claim 14, wherein said at least one ring frictionally engages said side wall defining said cylinder portion, said at least one ring being deformable upon movement of said member in said chamber.

16. The actuatable fastener recited in claim 13, further comprising a spring for biasing said member against movement in said chamber prior to actuation of said initiator, said spring being deflectable by said member upon actuation of said initiator to permit movement of said member in said chamber.

17. The actuatable fastener recited in claim 2, wherein said shank further comprises a terminal shoulder portion, said first and second shank portions being positioned between said head and said terminal shoulder portion, said first and second shank portions each having a diameter smaller than said head and said shoulder portion.

18. The actuatable fastener recited in claim 17, wherein said first and second shank portions are insertable into respective slots of first and second structures to releasably connect said first and second structures, said slots having widths greater than the diameters of said first and second shank portions and

smaller than the diameters of said head and said shoulder portion.

19. The actuatable fastener recited in claim 18, wherein said first and second structures are biased away from each other which causes a frictional engagement between said shoulder portion and said first structure and between said head and said second structure, said frictional engagement helping to connect said actuatable fastener to said first and second structures.

20. The actuatable fastener recited in claim 1, wherein said chamber has a cylindrical configuration and said member has a cylindrical side wall positioned in said chamber with an open first end portion proximate said initiator and an opposite closed second end portion proximate said end wall of said chamber, said second end portion including a domed end wall having a first surface presented concavely toward said end wall of said chamber and an opposite second surface presented convexly toward said initiator, said second end portion having a terminal end comprising an annular rim defined at an intersection of said side wall of said member and said domed end wall.

21. The actuatable fastener recited in claim 20, wherein said annular rim strikes said end wall of said chamber to create said fracture upon actuation of said initiator, said combustion products thereafter acting on said domed end wall and reversing said domed end wall such that said second surface is presented concavely toward said initiator and said first surface protrudes convexly at least said predetermined distance beyond said fracture.

22. An actuatable fastener comprising:

a body including a head and a shank, said shank comprising a first shank portion and a second shank portion; and

an initiator at least partially supported in said body, said initiator being actuatable to rupture said shank and separate said first shank portion from said second shank portion;

said first shank portion having an outer surface including first screw threads, said second shank portion having an outer surface including second screw threads, one of said first and second screw threads

comprising right hand threads and the other of said first and second screw threads comprising left hand threads.

23. An actuatable fastener comprising:

a body including a head and a shank, said body including a hollow interior chamber extending from said head into said shank;

a member disposed in said chamber and slidable in said chamber; and

an initiator at least partially supported in said head, said initiator being actuatable to produce combustion products in said chamber that act on said member to move said member in said chamber, said member acting on said shank to rupture said shank;

said member being formed as a single piece of material and including at least one portion comprising annular ring projecting from an annular outer surface of said member, said at least one ring engaging a side wall of said chamber and providing a seal for helping to block said combustion products from escaping said chamber when said initiator is actuated.

24. An actuatable fastener comprising:

a body including a head and a shank, said body including a hollow interior chamber extending from said head into said shank;

a member disposed in said chamber and slidable in said chamber along an axis;

an initiator at least partially supported in said head, said initiator being actuatable to produce combustion products in said chamber that act on said member to move said member in said chamber, said member acting on said shank to rupture said shank; and

a spring positioned in said chamber and engaging said member, said spring biasing said member against movement in said chamber to prevent said member from rattling in said chamber prior to actuation of said initiator.

25. Apparatus comprising:

an inflatable vehicle occupant protection device for helping to protect a vehicle occupant, said inflatable vehicle occupant protection device having a deflated condition and an inflated condition;

an inflation fluid source actuatable to provide inflation fluid to inflate said protection device from the deflated condition to the inflated condition;

a housing for helping to direct inflation fluid from said inflation fluid source toward said protection device upon actuation of said inflation fluid source;

a vent opening in said housing for venting inflation fluid from said housing;

a vent member movable a predetermined distance from a closed position blocking venting of inflation fluid through said vent opening to an open position enabling venting of inflation fluid through said vent opening; and

an actuatable fastener having a shank with a first portion connectable with said vent member and a second portion connectable with said housing to hold said vent member in said closed position, said actuatable fastener being actuatable to fracture said shank and release said vent member for movement toward said open position, said actuatable fastener further comprising means for displacing said first portion the predetermined distance from said second portion to propel said vent

member the predetermined distance from said closed position to said open position.

26. An actuatable fastener comprising:
a body including a head and a shank;
a member disposed in said body; and
an initiator connected with said head and being actuatable to produce combustion products that act on said member to urge said member against a surface in said shank to create a fracture in said shank separating at least a portion of said shank from a remainder of said shank, said combustion products thereafter acting on said member to deform said member to extend beyond said fracture at least a predetermined distance to move said at least a portion of said shank at least said predetermined distance from said remainder of said shank.